BULLETIN of the
SCHOOL OF EDUCATION
INDIANA UNIVERSITY

An Approach to the Study of Motivational Problems in Education

by

William W. Lynch, Jr.

Vol. 31, No. 2 March, 1955

OFFICERS OF THE UNIVERSITY

HERMAN B WELLS, A.M., LL.D., President

HERMAN THOMPSON BRISCOE, Ph.D., Vice-President, and Dean of the Faculties

JOSEPH AMOS FRANKLIN, B.S., Vice-President, and Treasurer

JOHN WILLIAM ASHTON, Ph.D., LL.D., Vice-President, and Dean of Student and Educational Services

WENDELL WILLIAM WRIGHT, Ph.D., Vice-President, Dean of the School of Education, and Director of Administrative Studies and Institutional Relations

CHARLES EDWIN HARRELL, A.B., LL.B., Registrar, and Director of the Office of Records and Admissions

ADMINISTRATIVE STAFF OF THE SCHOOL OF EDUCATION

WENDELL WILLIAM WRIGHT, Ph.D., Dean

HOWARD T. BATCHELDER, Ph.D., Assistant Dean

(MRS.) DOROTHY J. MCCAW, Assistant to the Dean

PHILIP PEAK, Ph.D., Assistant to the Dean

OTTO HUGHES, Ed.D., Principal of the University School

KATHLEEN DUGDALE, A.M., Editor of Publications in Education

ADMINISTRATIVE STAFF OF THE DIVISION OF RESEARCH AND FIELD SERVICES

HAROLD H. CHURCH, Ph.D., Director of the Division of Research and Field Services

WILLIAM H. FOX, Ph.D., Assistant Director of the Division of Research and Field Services

RUTH FAY ARGANBRIGHT, M.S. in Ed., Assistant Director of the Division of Research and Field Services

PAUL W. SEAGERS, Ed.D., School Building Consultant

W. MONFORT BARR, Ed.D., Consultant in School Finance

AUGUST W. EBERLE, Ph.D., School Community Consultant

XU

BULLETIN OF THE SCHOOL OF EDUCATION
INDIANA UNIVERSITY

An Approach to the Study of Motivational Problems in Education

by

William W. Lynch, Jr.

Published by the
DIVISION OF RESEARCH AND FIELD SERVICES
Indiana University

Price, $1.00, postpaid

For sale by the Indiana University Bookstore

Bloomington, Indiana

Entered as second-class mail matter September 30, 1924, at the post office at Bloomington, Indiana, under the Act of August 24, 1912. Published in January, March, May, July, September, and November of each year, from the University Office, Bloomington, Indiana.

TABLE OF CONTENTS

PAGE

INTRODUCTION 5

GOALS AND ACTIVITIES IN MODERN EDUCATION 10

PSYCHOLOGICAL BASES FOR AN EDUCATIONAL THEORY OF MOTIVATION 20

AN EDUCATIONAL THEORY OF MOTIVATION 25

MOTIVATION AS ORGANIZATION OF ATTENTION AND PERCEPTION 27

MOTIVATION AS THE ENERGIZING AND DIRECTING OF RESPONSES 29

BIBLIOGRAPHY 46

AN APPROACH TO THE STUDY OF MOTIVATIONAL PROBLEMS IN EDUCATION

Introduction

An understanding of human motivation is undoubtedly one of the most important bases for effective educational practice. This is particularly true when we consider that pupil enthusiasm and well-directed, purposeful activity are among the characteristics of good classroom teaching. All too frequently, however, the achievement of the goals of teaching seems to be thwarted by the existence of problems which can be understood and solved only through a better understanding and control of pupil motivation.[1] A representative sampling of these problems would probably include the following:

1. How does the effective teacher motivate pupils? How does one generate attention, interest, enthusiasm, and purpose, and maintain these states in such a way as to accomplish the goals of instruction? Prominent among the problems of the classroom teacher are the students who are either inattentive, apathetic, or impelled by drives which appear to be totally inappropriate to the situation.

2. How does the teacher utilize or tap existing pupil motivation? The pupil who is apathetic in the classroom is rarely one who is obviously totally unmotivated. Yet the problem of relating classroom activities to his own concerns in such a way as to bring outside enthusiasm into the classroom is frequently a perplexing one.

3. How should the teacher treat pupil motives which result in undesirable and disruptive behavior in the classroom? Are there practical measures which the teacher can take to understand the motivation behind such behaviors? While the effective teacher has a mastery of techniques for the immediate handling of behavior problems, these techniques rarely seem to treat the source. Are there particular ways in which behavior problems can be held in check and at the same time cause the pupil to want to behave more appropriately and constructively?

4. How are the present motives of pupils transformed into more mature and socially desirable forms? If we accept the point of view that new interests, increasingly mature purposes, and significant increments of self-directed motivation are among the most

[1] Davis, Robert A., "The Teaching Problems of 1,075 Public School Teachers," *Journal of Experimental Education* 9:41-60, September, 1940.

important outcomes of instruction, then we need to understand the conditions under which the learning of new motives may be effectively guided.

5. How can the teacher evaluate motivational changes that result from instructional practices? If we accept the principle that the development of motives are as important outcomes of teaching as improvements in skill, knowledge, and understanding, do we not need to develop our techniques of evaluating motives to a level that is at least comparable to that used in appraising the more conventional achievements? We have means to determine whether or not a student has grown in the understanding of the processes of his government, for example. But can we, with equal effectiveness, appraise the extent to which he desires to develop that understanding further, or the extent to which he has favorable attitudes toward his role as a citizen that will impel him to take the active interest in government expected of the citizen of a democratic society?

6. How can the teacher effectively handle group activities in the classroom so that divergent pupil interests and drives can be directed into unity of group purpose? Is it possible to achieve more than an imposed appearance of group cohesiveness and commonness of goal under most classroom conditions? Why do groups of pupils differ in the character of motivation shared by their members? The increased interest among educators in the role of group processes in the classroom creates new demands for a better understanding of human motivation as it affects groups as well as individuals.

As educators attempt to solve the multiple problems of motivation in teaching, they turn to the educational psychologist, the child development specialist, the mental hygienist, the educational researcher, and other students of human behavior for practical clues to better understanding. Too often the clues appear in the form of generalizations and theoretical statements which are difficult to apply in practice. Teachers are urged to consider the basic needs of their pupils. Or they are taught that "all behavior is purposeful" and that "all learning is motivated." Such generalizations may be embellished with illustrations, theoretical arguments, or selected experimental evidence. While they may appeal to the teacher's general point of view about human nature and may help to focus his attention upon certain aspects of pupil behavior and the teaching-learning process, they seem to lack the concreteness of reference to observable facts of the on-going teaching situation of the typical school to be truly useful. This, however, should not be considered surprising. While it is possible to describe and study systematically many aspects

of behavior and their pertinent environmental variables, such attributes as motives, drives, needs, interests, and attitudes become discouragingly evanescent when the scientist tries to study them. One reason for this is the very nature of such a concept as *motive*. It is an abstraction, frequently a very high order abstraction, which is derived from certain qualities and consistencies observed in behavior. The language of the layman treats such concepts as though they are very real and concrete. To the scientist they are "hypothetical constructs" which frequently must be defined by very complex operations.

Yet the educator's difficulty in understanding motivation can not be attributed solely to a lack of scientific or semantic sophistication. A sizable body of educational and psychological research has been conducted to aid in the understanding of motivational problems of the classroom. There is no apparent lack of factual data concerning many concrete variables. Some of the earlier and oft-quoted studies have investigated the effects upon performance of various social incentive conditions which might be used by the teacher, such as rewards of various kinds, competition for individual and group prizes, praise and reproof, and the like.[2] Rather exhaustive surveys of the interests of various age groups have been made.[3] The study of the effects upon learning of various types and schedules of reward or, more recently, of "reinforcement," represents another approach to the problems of teaching.[4] Genetic studies of child and adolescent behavior based on such concepts as "styles of individual growth"[5] and the "developmental task"[6] place many of the problems of motivation within the context of maturational growth and cultural pressures. In recent years considerable attention has been paid to the analysis of expressive products, such as children's drawings, and of responses to projective tests. These approaches represent efforts to tap presumed "deeper" levels of motivation which may be activating pupils in the classroom.[7] Another approach is represented in a growing

---

[2] See, for example, Hurlock, Elizabeth B., "An Evaluation of Certain Incentives Used in School Work," *Journal of Educational Psychology* 16:145-159, March, 1925.

[3] See, for example, Witty, P. A., and Coomer, A., "Activities and Preferences of a Secondary School Group," *Journal of Educational Psychology* 34:65-76, February, 1943.

[4] See, for example, Mech, Edmund V., and others, *An Experimental Analysis of Patterns of Differential Verbal Reinforcements in Classroom Situations.*

[5] Olson, Willard C., *Child Development,* pp. 163-191.

[6] Havighurst, Robert J., *Developmental Tasks and Education.*

[7] Buhler, Charlotte, and others, *Childhood Problems and the Teacher.*

number of studies dealing with level of aspiration.[8] Certainly the educator has access to a body of facts about motivation that is impressive in its size and detail. Yet the meaning of much of this body of research is far from clear. One reason for this has been stated by Young:

> Failure to realize that an experimental result is relative to the particular conditions under which it is obtained has led to an erroneous view that praise, reward, success, knowledge of results, etc. are independent motivating factors which operate in the same way in all situations. And this in turn has led to the search for general principles of motivation which he relied upon in the classroom. Unfortunately such general principles cannot be stated definitely today.[9]

Another reason for the apparent lack of usefulness of much of the body of research on motivation relative to educational practice lies in the educational assumptions held, often implicitly, by researchers. These assumptions seem to be of two sorts. First, the variables that are assumed to be operating in the classroom may omit from consideration others that are actually of prime importance. The second type of assumption concerns the purposes of instructional activities and sometimes leads to the accumulation of reliable data concerning processes which are of minor educational significance.

Perhaps, however, the most important reason for the disappointing lack of applicability of educational research on motivation is the lack of an adequate way of relating factual data from both the researcher and the direct experience of the classroom itself to a valid general view, or theory, of human behavior. Not only do various research studies stem from varying psychological theories, but the educational consumers of research hold to differing views of human nature. This results in considerable difficulty in achieving meaningful communication between researcher and consumer.

At the present time the educator is faced with a variety of psychological theories which are rather confusing in their differences of terminology, the types of behavior studied, and their not infrequent conflict in point of view. How is the educator able to relate, for example, the studies of child development, with their concern with developmental tasks, growth needs, etc., to the studies of personality dynamics. Both fields of inquiry use common terminology,

---

[8] Lewis, Kurt, and others, "Level of Aspiration," in *Personality and the Behavior Disorders,* pp. 333-378.

[9] Young, P. T., "Motivation," in *Encyclopedia of Educational Research,* pp. 755-761.

such as "need," yet do they mean the same thing? Some psychologists speak of two dozen or more basic, fundamental needs which are generally shared by human beings, yet others refer to a single basic need. Even among the many studies of learning it appears that much disagreement concerning motivation extends from those writers who find motivation to be either insignificant or a superfluous concept to those who feel that learning can occur only when there are needs which are rewarded or tensions which are reduced.

It is undoubtedly clear to most present-day educators that the motivational problems of the classroom are not simply reduced to the question of how we impel the student to "go through his paces," and that facts about different kinds of incentives which activate pupil effort are not particularly useful. It should also be clear that neither more facts about motivation nor more theory concerning motivation will help to answer the pressing practical problems of the classroom teacher. It appears that there are two basic problems which require attention. In the first place concepts concerning human motivation need to be refined in the light of careful interpretation of a growing body of theory and experimental data from the several sciences dealing with human behavior. This refinement of the concepts which are used will then make it possible to ask such questions as were listed on pages 1 and 2 in a fashion conducive to more scientific diagnosis of the problems and the ability to suggest more valid solutions. This will also make it easier for educators to synthesize a large body of facts within an educational theory of motivation which is pertinent to the values sought in practice and the variables which are significantly involved in the classroom. The second need is for vigorous and well-conceived educational research that is designed to test hypotheses derived from such theory and to test the pertinence of findings of the psychological laboratory and clinic.

The purpose of this bulletin is to propose some of the ways in which an educational theory of motivation (1) may be based on an interpretation of modern educational practice, (2) may begin to incorporate some of the more significant advances in other "pure" or applied behavioral sciences, and (3) may be tested through educational research.

Attention will first be given to the demands made on a theory of motivation by current educational objectives and activities and the environmental realities of the school and classroom. Necessary psychological assumptions for an educational theory of motivation, the outlines of such a theory, and suggested approaches to research will then be discussed.

Goals and Activities in Modern Education

Today's teacher tends to be concerned with a wide variety of learning outcomes and must be skillful in the creation of conditions which are conducive to the achievement of these outcomes. The perception of the demands of a complex society and the sensitivity to shifting patterns of social values have made it necessary to reconstruct conceptions of the proper setting and methodology of teaching. New insights into human behavior, particularly into development, learning, and human differences, make it necessary to conceive of teaching objectives in new ways which are not only socially valid, but psychologically valid as well. In general the role of the school as a social institution is such that it must foster types of educational development that were formerly considered incidental. Thus, while the skills and tools of learning as well as a basic knowledge of the cultural heritage continue to be strongly emphasized, these outcomes are seen as coextensive with others such as social competencies and attitudes, problem-solving skills, aesthetic expression and appreciation, emotional maturity and adjustment, and specific vocational proficiencies. Perhaps most important to this discussion is the emphasis upon motivation itself as a key objective in the modern school, particularly the emphasis upon the development of increasingly mature forms of self-motivation and self-direction along lines appropriate to the values of a democratic culture. Such multiplicity of behavioral outcomes is not seen as made up of discreet or unrelated outcomes. The integrity and functional unity of the individual personality is a theme which appears to run through most conceptions of modern education.

Perhaps as significant as the current trends in conceptualizing the goals of education are the ways in which educators conceive of the teaching environment and methodological tools. Among the more important concepts is that of the school as an integral part of the community. With technological advances has come a variety of teaching aids and tools, as well as new and varied styles of human relationships within the school in the forms of varying the teacher's role with respect to pupils, introducing specialized personnel, making new approaches to administrative functions, and adapting the structure and function of pupil groups to particular purposes. The physical environment of the school itself represents an important part of the setting of modern instructional practice.

A valid and useful conception of human motivation must be adaptable to all of the realities and complexities of contemporary

educational objectives and settings. It must take into account the varied behavioral outcomes of instruction as well as the functional unity of the individual. Hence, a motivation theory based primarily on incentives or inducements to effortful striving may not be particularly valid when applied to learning situations (such as the acquisition of esthetic appreciations) where such striving is not particularly significant or desirable. An adequate theory of motivation must be applicable to the vast differences in behavioral tendencies found in the public school population. Hence, for example, it must be applicable to children who, by virtue of particular patterns of past experience and maturation, manifest relatively little tendency toward achievement striving. Furthermore, it must be compatible with developmental trends. Such a theory must be adaptable to varying age and grade levels. A useful theory of motivation must also give an appropriate basis for understanding and guiding the development of motives, interests, attitudes, and other dynamic qualities of human behavior as outcomes as well as means to other behavioral ends. It must give the educator some basis for judging the probable changes in motivation that result from instruction. Hence, a concept of motivation which emphasizes fixed and immutable dynamics would seem to be of small value.

A further criterion of the validity of an educational theory of motivation is that it must be couched in terms which may be readily translated into the observable and manipulatable variables of the teaching situation. This criterion requires further elaboration. Two factors must be considered to define these terms: (1) the typical modes of behavior available for interpretation and assessment within the normal environmental settings of teaching, and (2) the practical techniques that are readily available to educational personnel for securing data and making judgments about motivation.

Pupil behavior as a basis for interpreting motivation. Pupil behavior in school situations is in large part a function of the particular physical and social environment present. While the clinician and the laboratory psychologist can create special and unique conditions to elicit behavior from which inferences about motivation may be drawn, it seems that the conditions of the school are unique. As a result, one of the important tasks of educational research is to adequately define exactly what these conditions are. It would seem that a simple and casual description of the school is of limited value. More research along the lines followed by Wright and others

on the psychological ecology of the classroom would seem to be an invaluable contribution to more sophisticated educational theory and research.[10]

In the absence of much careful description and categorization of the educational environment and pupil behavior within that environment, however, some tentative categories of situations may be indicated.

1. *Habitual, routine situations.* Much teaching activity and corresponding pupil reaction centers around routine preparation for other activities. Such activities as securing materials, going from one room to another, getting organized into various group activities, giving and receiving routine instructions, and tidying take up a surprising amount of time in the typical classroom. At first glance it might seem that such activities, particularly when well grounded in habit, would offer scant opportunity for analysis of motivation. Yet it is possible that behavior in such circumstances may yield valuable and unique bases for better understanding. The child who, in spite of much experience in such activities, is not particularly responsive or adaptable to routine may thereby yield valuable cues to his motivations. Differences among children in dependency on routine may also be significant.

2. *Situations involving communication.* So much of teaching involves communicative activity that it would seem that pupil behavior in situations involving listening, telling, questioning, and discussing are typical. Particular modes of attentive behavior while listening may be significant (listening to the teacher give instructions, commands, and requests; listening to stories; listening to explanations; listening to pupil reports; etc.). Particular styles of speaking in different situations in terms of vocabulary choice, syntax, vocal tone and inflection, as well as verbal fluency and content may be valuable in offering clues to motivational dynamics.

3. *Problem-solving situations.* The bulk of school activity centers around getting things done. For this reason, it is not uncommon to think of pupil behavior in the classroom as consisting of sequences of problem-solving behavior in which goals are assumed by the pupil and various instrumental responses are made until either the goal is reached or, as a result of thwarting, the pupil shifts his goal or escapes psychologically from the situation in some manner that is at least temporarily satisfying. In a sense all behavior

---

[10] Wright, Herbert F., and others, "Toward a Psychological Ecology of the Classrooms," *Journal of Educational Research* 45:187-200, November, 1951.

may be described in this fashion.[11] However, while many of the habitual and communicative behavior situations described above may frequently occur as a part of a goal-oriented, problem-solving sequence and hence be treated as such, it would seem more accurate to distinguish between those situations which are characterized by a high degree of organization of the pupils' resources to resolve some difficulty, to make a decision, to clear up some perplexity, to accomplish some task, or to ease a tension and those that are only incidentally or minimally so.

Tentatively it seems reasonable to suppose that problem-solving situations vary as to type. One type of problem situation that is frequent in school situations is that involving human relationships. It would seem that pupils often need to marshal their resources to meet the various social pressures within the classroom. Thus the critical factors of the problem (to the pupil) would be the demands, feelings, and expressions of approval and disapproval of other people. A second major type of problem-solving situation would seem to be that involving a task. Here the pupil's problem is defined by materials, products, symbols, or ideas, and his attention is primarily on them rather than on the people in his environment. Unquestionably, many situations contain elements of both social pressure and task orientation, but it would seem possible to describe many situations by which of the two seems to predominate.

For particular types of analysis, problem situations may be categorized in other ways. Thus, they may be characterized by the amount of reflective thought demanded or involved, or the amount of trial and error activity shown. Problems may be characterized by their difficulty, amount of clarity, or complexity. But for purposes of describing modal characteristics of classroom situations, to be covered by a theory of motivation, it would seem desirable to emphasize the more or less obvious demands of the situation.

Particularly significant aspects of pupil behavior in problem situations would include types and directions of choices, reasoning activity, attention toward various elements of a situation, trial and error behavior, rigidity and stereotyped behavior, expressions of effort and tension, and expressions of satisfaction, dissatisfaction, and frustration.

4. *Situations involving spontaneous enjoyment.* Among the less frequent but nonetheless significant situations in a pupil's school

[11] See, for example, Anderson, G. L., and Gates, A. I., "The General Nature of Learning," in *Learning and Instruction,* pp. 16-18; Cronbach, Lee J., *Educational Psychology,* pp. 45-47.

experience is that type which is characterized by spontaneous activity which is engaged in for its own sake. Included in this category would be free motor activity or exercise, singing, listening to music, certain types of manipulation of materials (such as clay or finger paints) where the sensory experience is primary, and, perhaps, free vocalization. While perhaps seemingly non-purposeful in nature, these situations need to be included in any scheme of motivation which is applicable to education.

5. *Passive observation.* Pupils occasionally find themselves in situations that do not involve them directly but are of such a nature that their attention is drawn toward certain aspects of the situation. Watching a play or film, watching other children put on a demonstration, or observing the teacher with another pupil would be examples.

Since it appears that modern educational practices are such that they approach many other life experiences of pupils in their demands and complexities, any list must be rather arbitrary and incomplete. Certainly the categories listed above are not only rather loosely defined but could not hope to encompass every situation to be found in the school. Categories 1, 2, and 3 would seem to be most common, and an educationally useful view of motivation would probably have to be particularly applicable to them and conducive to inferences about motivation drawn from behavior in such situations. Categories 4 and 5 (and possibly others not mentioned) should also be accounted for.

The tools and techniques for appraising pupil behavior in education. In order to make valid judgments about motivation in educational practice it is necessary to secure information about pupil behavior. Just as the conclusions drawn by the scientist from his observation of phenomena in the laboratory must be a function of the methods used in observation, so the judgments about pupil motivation in the classroom must rest upon the facts discerned by the teacher. Of course the task of the teacher in securing accurate and pertinent data is much more difficult than that of the scientist. The teaching situation is complex and dynamic. The teacher does not exert as high a degree of control over the variables affecting behavior, nor does he have at hand the instruments and tools for precise recording and measurement of behavior. For these reasons it is necessary that close attention be paid to the usable and available techniques for appraising behavior. Note must be taken of the limitations of these techniques and the concepts to which these techniques lead.

The techniques listed below constitute the principal means by which the complexities of behavior in the immediate classroom situation are capable of being discerned.

1. *Teacher action and teacher observation.* The very dynamic nature of the classroom and other educational situations is such that pupil behavior must be immediately perceived and interpreted by the teacher (or some other observer). The practicalities of teaching are such that quick judgments and decisions must be made on the basis of direct observation. The way in which a good teacher is able to make valid observations and inferences about behavior is a matter deserving far more study and research than it has received to date. Undoubtedly one significant factor in this process is the teacher's own perceptual frame of reference for judging behavior. The teacher who is preoccupied with the necessity of order and conformity may view behavior from a frame of reference whose dimensions are largely of a moralistic nature. The teacher who is capable of a high degree of empathy may interpret pupil behavior largely in terms of affective pleasure or discomfort. Each teacher undoubtedly has his own more or less structured theory of behavior which determines the behavioral cues to which he is sensitive. His own role and status within the situation prevent him from being a detached observer. One of the primary purposes for developing an educational theory of motivation is to provide a valid frame of reference for the interpretation of behavior which can be readily adapted to the needs of the teacher for immediate interpretation of face-to-face situations.

Of course the teacher is not only an observer but also an influencer of pupil behavior. Many problems of interpretation of pupil behavior are immeasurably easier to solve as a result of deliberate testing of hunches concerning causation. Berrien and others refer to the ability to form quick hypotheses and to test them in action in human relationships as a type of "syncretistic thinking."[12] Various techniques of clarifying, redirecting, attention getting, distracting, suggesting, questioning, as well as verbal reprimanding and rewarding may be used not only to solve immediate problems but to secure more information concerning the factors influencing behavior.[13]

In addition to observing the general style of behavior in the various kinds of situations described above (adaptation to routine,

[12] Berrien, F. K., *Comments and Cases on Human Relations,* pp. 48-62.

[13] Redl, Fritz, and Wattenberg, William W., *Mental Hygiene in Teaching,* pp. 261-314.

communicative behavior, problem solving behavior, etc.), there are types of response categories, such as expressive movement, emotional behavior, pupil products, and social interactions, that seem available to observation and interpretation. These are:

a. *Expressive movement.* Style of motor activity, posture, use of gesture, tone of voice, facial expression, and various tension reducing responses such as head scratching, repetitive movement, lip sucking, etc. offer cues to feelings, tensions, and non-verbal communicative meanings.

b. *Emotional behavior.* While emotions are very difficult to judge accurately, teachers can find ample opportunity to observe expressions of fear, anger, disappointment, general anxiety, boredom, depression, joy, exhileration, etc.

c. *Pupil products.* Teachers usually have at hand much potentially useful information about behavior in the form of pupil products. Such products are particularly valuable inasmuch as they can be subjected to a more detached and critical analysis than can be made of actual on-the-spot classroom behavior. Certainly the teacher is uniquely qualified to appraise the products of pupil endeavor. There would seem to be two major types of product which offer important clues to behavior. One is the more familiar type of traditional school work—themes, problems, workbook responses, exercises, projects, models, collections, etc. Another type consists of the products of creative and imaginative expression, such as drawings, paintings, claywork, and imaginative and spontaneous writing.

d. *Social interaction.* In interpreting the behavior of an individual pupil the teacher is not the sole observer. The reactions of other pupils to an individual give the teacher the benefit of other observations and interpretations. The roles and status positions accorded to an individual offer to the teacher valuable clues derived from the particular impression made by the individual upon others.

2. *Aids to observations.* Various techniques can be used by the teacher to objectify and make more reliable the direct observation of pupil behavior. Check lists, rating scales, and the like help to focus attention on certain behavior categories. Anecdotal records afford another method of "freezing" behavior for subsequent analysis. The units and terms of such techniques are basically no different from those of direct observation mentioned above. A more valid theory of motivation could offer enhanced value to such techniques if it itself is pertinent to the situations where such techniques would be used.

3. *Standardized tests and scales.* While there are many tests and other devices developed by psychologists to study and measure human motivation, few are used widely in educational practice. Of those that are used, the interest inventory, personality questionnaire, and attitude scale are most frequently found. While of considerable use in making certain types of decisions and in giving certain kinds of guidance, they are difficult to relate to major educational activities. In many cases the theoretical basis of the instrument is so unclear as to make it rather difficult for the typical teacher to use it with clarity of understanding and confidence.

Tests of ability and achievement may supply information that may yield inferences about motivation. Occasionally discrepancies between measures of ability and achievement may suggest lack of interest or motivation. Such inferences, however, must be made cautiously and must take into account the specific reliabilities, norms, and validities of the measures used. Discrepancies may result from many factors.

4. *Teacher-constructed instruments.* Opportunities may frequently arise in teaching when the teacher may construct a test which effectively yields clues to pupil preferences, interests, problems, attitudes, etc. For example, it may be helpful for a teacher to know which aspects of a unit in science children are interested in, in order to develop projects, or other activities. Such instruments may take a variety of forms, ranging from a highly structured check list to a freely given expression by the pupils. Sociometric techniques involving indications of preferences or "Guess Who" choices may yield useful information concerning inter-pupil perception. Another device that may frequently be useful is the autobiography which can give clues to a pupil's self-perception. While probably not finding wide usage at present, various simple tests of level of aspiration could conceivably be of use. In such a test the teacher may, in a task situation, give pupils information concerning their present performance level and then ask them to indicate what score or level they expect, hope, or will try to achieve on future trials. This particular technique will be discussed in further detail.[14]

Summary. This survey of the direction and scope of teaching practice, its modal psychological variables, and the practicable techniques for securing information concerning motivation may be summarized by pointing out that any adequate educational theory of

[14] Pages 40-44.

motivation must be capable of encompassing a wide variety of situations and types of pupil behaviors, and must be couched in such terms as lend themselves to application by educational personnel. An educational theory of motivation must necessarily be distinguishable from other psychological theories of motivation.

In the first place, the types of readily assessable behaviors limit the response variables of such a theory. While clinically oriented theories of motivation may depend heavily upon fantasy production, interpretation of standard ambiguous stimuli, responses to clinical interview and personality questionnaires, etc., such responses are not sufficiently frequent nor interpretable by the teacher. A theory founded on the controlled experimentation of the laboratory may be adequately framed as a "small system" or "model," or may be based on variables which theoretically could apply to everyday situations. But such a theory is either too limited in scope, or too dependent upon precise measurement of variables, or too demanding of control of variables to be directly applicable to education.

The educational stimuli or environmental variables to be accounted for must emphasize the social nature of the classroom. Prominent in the teaching-learning situation is the stimulation provided by the teacher, who, while performing many functions of communication and control and fulfilling various roles, is usually an authority figure. Also prominent in the educational environment is the emphasis upon symbolic stimulation through written and spoken words, numbers, pictorial devices, and other stimuli which create many necessary substitutes for more direct experience. Furthermore, the school is probably typically perceived by the pupil as a place where tasks are accomplished, where directions and suggestions are followed, and where certain restrictive boundaries exist which are to be complied with (or rebelled against).

On the response side, there is a large amount of task- or problem-oriented behavior. Reactions are largely couched in symbolic activity primarily involving verbal communication. Emotional release and style of expression is strongly limited by the psychological boundaries of convention and appropriateness. While a few usable techniques of appraisal which can objectify and quantify behavior or its products are practicable, most of the interpretation of behavior in the on-going, face-to-face teaching situation must be made on the basis of direct perception of pupil response to semi-controllable situations.[15]

---

[15] Obviously, these characterizations have varying validity for particular school situations. An attempt has been made to describe what appear to

An educational theory of motivation must be firmly grounded in both educational and psychological theory. It must serve the particular purposes of educational practice that are grounded in particular value orientations. (The approach to a theory discussed here is assumed to be oriented toward practice in the public schools and is based on the assumption that such schools are firmly committed to a philosophy of service to all pupils, are focally concerned with their effective function as citizens in a democratic society, and look upon the outcomes of teaching as contributing to a self-directed, integrated personality.) Also such a theory must necessarily be so constructed as to make possible progressive modification, as both psychological knowledge and educational values undergo change. Such a theory must be capable of being developed in a scientifically sound fashion to the point where it can serve as the basis of theoretically well-grounded research in education, both by its logical soundness and by its basis in observable behavior. It should meet the general criteria of psychological theory, formulated by Gustav Bergmann and indicated by McCandless and Rosenblum as follows:

> A psychological theory should be based on concepts which ultimately, by longer or shorter definitional chains, are defined by immediately observable bits of behavior, and every psychological theory should include at least one such concept. Also, a theory consists of a set of laws deductively connected, some of these . . . allowing for the deduction of others.[16]

Such theory should also be capable of being developed into terms of predictable relationships that can be appropriated by teachers and others in professional education as guides to observation and action.[17]

---

the writer to be more or less typical characteristics. Some schools may be less task oriented, more oriented toward free emotional expression, or more oriented toward routine and regimentation. Pupils from particular community conditions may vary from this picture in the modal types of response made to the school situation. More naturalistic observation and classification is needed in educational research.

[16] McCandless, Boyd, and Rosenblum, Sidney, "Psychological Theory as a Determiner of Experimental Pattern in Child Study," *Review of Educational Research* 22:496, December, 1952.

[17] The criteria of science and of education may not always be compatible. Simplicity and neatness in a "pure" science may demand techniques of control and measurement in the testing and application of the theory in the laboratory that are not available to the teacher. On the other hand, there is no reason why educational theorizing should abandon the "law of parsimony" merely because control and accuracy can not be achieved. The mere fact of greater complexity and indeterminacy of the teaching situation places greater demands

The outlines of such a theory will be suggested below, together with indications of the directions in which such theory may proceed toward improved teaching and improved educational research.

Psychological Bases for an Educational Theory of Motivation

A theory of motivation can not be useful if it is based on concepts and principles that are so unique and specialized that they can not be related to other basic psychological concepts. Scientific investigation of human behavior is gradually yielding important and useful facts and principles concerning man's biological functioning, his development, the ways in which he profits from experience, and the ways in which one individual differs from others in the organization of his behavior. Improved understanding of human motivation can result only when the very concept of motivation itself as well as its explanatory principles are seen in relation to the basic variables of a valid psychology.

Definition of motivation. Everyday use of the term "motivation" frequently implies a simplicity and concreteness that is somewhat deceiving. Careful analysis of a bit of behavior may lead one to a curious dilemma. In attempting to discover the "motive" behind an action, one either finds oneself caught in the circularity of saying that a person responds in a certain way because he is motivated to respond in that way or, in looking for more basic or deeper motivational causes, one infers that such entities as motives, drives, needs, interests, etc. somehow exist within the individual. When forced to indicate just what these entities may be, one is at a loss to give a definition which can serve for subsequent understanding and prediction. Such is the danger of reification of mental entities.

It is assumed in this discussion that such terms as motives, needs, drives, and interests are simply abstract terms whose meanings are defined by certain observed relationships in behavior. While a complete definition of specific motivational concepts can not be made without subsequent analysis of psychological foundations, it may be stated at this point that motivation, and such associated terms as drive, need, and interest, are convenient representations

---

on theory for parsimony. If the demands made on the teacher's attention can be reduced by simplicity of conceptual framework, the functional validity of theory is enhanced. However, the concepts used in an educational theory in order to achieve greater validity for teaching may differ from those used in psychological theory. This validity may be achieved by using the somewhat more "phenomenological" meanings available to the teacher in the form of direct perception of pupil behavior.

derived from certain qualities and consistencies observable in behavior within situations. These qualities refer particularly to (1) the energizing or activation of a person's responses, (2) the direction of a person's attention or perception, and (3) the orientation of behavior toward particular end points (or goals) of response sequences.

Keeping in mind the abstract and inferential nature of these constructs and their emphasis upon contemporary qualities of behavior within situations helps to prevent assuming that motives and the like somehow have an independent existence within the individual. Restricting the term to the energizing, attending, and orienting aspects of behavior helps to avoid using the terms so broadly as to encompass all of the causes of behavior. Thus, a theory of motivation is concerned with accounting for observable conditions which activate, direct, and orient behavior.

Psychological assumptions. Concise generalizations can be made that pertain to the motivational aspects of behavior that appear to be of particular interest to the teacher. The purpose of these generalizations is merely to point attention toward focal concepts. It should be fully realized that such brief statements can scarcely encompass the complexity and thoroughness of a well-developed psychology. It should also be realized that their validity at many points may not be firmly established but that they represent tentative conclusions. While it is impossible to document each statement completely, sample references will be given to sources that contain fuller developments of these generalizations.

1. Every person is continually subject to the physiological tensions of his body. The tissues of the body are constantly engaged in activities tending toward the maintenance of certain "dynamic equilibria" or states of balance. In addition to the ebb and flow of maintenance mechanisms, the individual organism undergoes progressive change with age, particularly during the first twenty years or so from birth. These maturational changes in bodily structure and function predispose the individual toward certain forms of activity that are characteristic of particular stages of growth. Overt, conscious behavior is partially a function of "homeostatic" and maturational mechanisms. Thus it is common to speak of certain qualities of behavior as resulting from primary or biogenic needs or drives.[18]

2. The individual is more or less continually stimulated through the sense receptors from both the internal and the external environ-

[18] For summary, see Hilgard, E. R., *Introduction to Psychology*, pp. 98-118.

ment. The nervous system, in mediating such stimulation, performs an organizing function by selecting and sensitizing the individual to particular sets of stimuli. The particular stimuli which are selected and to which the individual is particularly sensitive may be termed *cues*. The individual from birth onward is continually engaged in organizing his sensory experience. We refer to this process as *perception*. In everyday terms, we may say that the organism is continually trying to make sense out of a welter of sensory experience.[19]

3. As a result of its continual efforts to maintain physiological states of "homeostasis," to give expression to newly matured response processes, and to organize its sensory experience, the individual *learns*. While the exact nature of the process of learning is imperfectly understood, we can at least state that it results in (1) new sensitivities to particular stimuli (cues), (2) altered responses to stimulation, and (3) new expectancies. The term *expectancy* refers to a special case of response to perceived cues. It consists of the predisposition or preparation of the organism toward a sequence of responses that tend toward some state of affairs which the organism strives to maintain (goals or "satisfying states of affairs"). Hence, we can say that, as a result of learning, the individual acquires tendencies of action and orientation which supplement or supplant the tendencies resulting solely from the physiological tensions mentioned above in paragraph 1. Some of these tendencies are referred to as secondary or "psychogenic" motives.[20]

4. Since man is so well equipped to profit from his experience through learning, and since he is otherwise biologically equipped to use and manipulate very partial cues derived from particular situations, he is uniquely a symbolizing creature. Early in life the individual normally acquires considerable proficiency in formulating and manipulating self-produced verbal and other cues to help him in dealing with situations. As a result of his symbolizing ability and consequent ability to think, he is a "time-binding" creature.[21] He can anticipate and deal with situations that are not immediately available to his sense receptors. This is an important matter to consider in a discussion of motivation because it helps to clarify one's thinking about the extent to which behavior is goal directed or

---

[19] For summary, see Hilgard, E. R., "The Role of Learning in Perception," in *Perception—An Approach to Personality*, pp. 95-119.

[20] Mowrer, O. H., *Learning Theory and Personality Dynamics*, pp. 25-64.

[21] Korzybski, Alfred, "The Role of Language in the Perceptual Process," in *Perception—An Approach to Personality;* Cantril, Hadley, *The "Why" of Man's Experience*, pp. 47-49; Murphy, Gardner, *Personality—A Biosocial Approach to Origins and Structure*, pp. 247-269.

purposeful. It enables one to distinguish, at least conceptually, between learned or habitual sequences of behavior that end when the individual reaches the point at which he experiences release from tension or a "satisfying state of affairs" and behavior that predominately involves symbolic control in the form of self-produced cues representing future states of affairs (consciously held goals) which are consequently recognized when they are reached.

5. As a result of individual variation in bodily equipment, patterns of maturation, differences in experience, and differing modes of symbolizing, the particular "motives" which an individual will manifest at any given time may be expected to be distinctive and unique. While similarities of social environment and biological growth may lead to certain common patterns of motivation within a given culture, and while it is frequently convenient to summarize motives in terms of a small number of drives or needs, it is important to realize the individuality of motivation when applying the term to the members and activities of the classroom. As long as we freely acknowledge that individuals vary widely in ability and the meanings they attach to school experiences, we must also acknowledge comparable variability in motivation. Psychologically, motivation is simply a part of the total process of experiencing or reacting to situations. Discussions of motivation too often give the mistaken impression that needs, interests, drives, etc., exist apart from the total process of activity within situations, somehow existing within the individual. While it is semantically convenient to speak of a pupil's behavior as the result of his need for approval, it is somewhat inaccurate to the extent that it implies some mental entity which pushes him in certain directions. Motives should be considered an integral part of interpreting (reacting to cues), anticipating (certain sets or expectancies being established and/or certain symbolic controls being instigated), and responding to situations. The motivation of the act refers to the energizing and directing qualities of the total complex. Taking this point of view is not only more accurate psychologically, but it is more useful educationally because it helps to bring motivation "out into the open" and helps the educator to concentrate on the quality of behavior in the face-to-face situation of the classroom.[22]

[22] This point of view may, however, tend to invalidate certain assumptions that are implicit in certain teaching methodology. For example, a method which assumes that the most desirable learning activities must necessarily start with the fundamental motives and interests of children may assume too much separation of motives from concrete situations. A teacher holding to such a method may have difficulty in finding the fundamental motives of children and neglect creating a set of circumstances that will elicit significant dynamics, which, in turn, lead to worth-while objectives.

6. The term *behavior* is a very comprehensive one that encompasses responses that serve many functions. Up to this point in the discussion it has been implied that there are internal, physiological responses (the maintenance and growth functions of the body), interpreting responses (perception), anticipating responses, symbolizing responses, and manipulating responses (striped muscle activity involving manipulation, locomotion, etc.). In addition, consideration must be given to emotional responses. In various ways the human organism reorganizes its internal activity (particularly that which involves the viscera and autonomic nervous system) in the face of certain kinds of situations. It is difficult to describe any but the most intense emotional states in terms of typical overt activity. However, physiologically and from the point of view of subjective experience we must recognize that many or most situations elicit reactions that are, in one way or another, emotionally toned. Some psychologists feel that there is a very close relationship between expectancy responses and emotion or "affect."[23] It seems that, at least in many situations, the individual's set or expectancy is colored by anticipations of affectively pleasing or unpleasing consequences. The concepts of emotion and affect are important here in pointing attention to the fact that the internal "stirring-up" of emotion and the varying affective qualities of experience are significant factors in motivation in their energizing and orienting functions.[24]

7. In the process of growing up in a particular family and society the individual acquires his own unique sense of individuality. Children are probably not born with self awareness; but, rather, they acquire a sense of self as they perceive their own physical and psychological attributes mirrored in continual social experience. This process of acquiring a self-concept is merely a case of acquiring cue meanings (as described in 2 above). Not only does the individual perceive his physical and psychological self in a uniquely patterned fashion, but he also learns that certain objects, events, and social situations are particularly relevant to this sense of self. There is reason to believe that this sense of self and its associated experiences constitutes a very strong directing and organizing function in behavior. Thus we speak of certain experiences, situations, objects,

[23] Thus McClelland states that "affect is the innate result of certain discrepancies between expectations and perceptions. A motive is the learned result of pairing cues with affect or the conditions which produce affect." (McClelland, David C., *The Achievement Motive,* pp. 67-68.)

[24] For summary, see, Prescott, Daniel A., *Emotion and the Educative Process.*

people, and words as being ego-involved. Frequently these marshal the behavioral equipment of the individual in unique ways that are apparently designed to maintain some sort of integrity and stability of this set of ego-involved perceptions. Thus it is possible to refer to some activities as being strongly "ego-involved" and others as only negligibly so. If ego-involvement characterizes a particular situation it may be possible to discern unique ways in which perceptual, anticipatory, manipulatory, and emotional responses are organized. Since the development of self-concept is a continual process in which certain levels of development within a given culture have certain distinguishing characteristics, we have in this concept a particularly effective way of accounting for styles of motivation at various age and grade levels.[25]

Summary. The preceding paragraphs have stated certain psychological assumptions. They point to significant psychological factors which an educational view of motivation would probably have to take into account. It may be stated that a child's behavior in the classroom is a function of (1) his physiological and maturational status; (2) the particular meanings which the situation has for him (the particular cues to which he is responsive); (3) his learned responses to his situation, including his expectancies or anticipatory responses; (4) his ability to symbolize and the particular style of such symbolization; (5) his emotional or affective state; and (6) his perception and expectation of himself in relationship to his environment. It has also been pointed out that motivation is functionally an integral part of the individual's total action within a situation and not a thing apart. Individuals, by virtue of the operation of all of these variables, are unique in the ways in which their behavior is energized and directed—a conclusion which should make one cautious in assuming the "existence" of universal, common, or basic motives, needs, and the like.

An Educational Theory of Motivation

It has been pointed out previously that motivation may be usefully viewed as referring to those aspects of behavior-within-situations which relate to the activation of responses, the direction of attention, and the orientation of response sequences (pages 20-21). An acceptable theory of motivation should help in the formulation

[25] For summary see, Snygg, Donald, and Combs, Arthur W., *Individual Behavior: A New Frame of Reference for Psychology;* Murphy, *op. cit.,* pp. 479-539; Sherrif, M., and Cantril, H., *The Psychology of Ego-Involvements.*

of testable hypotheses which, if valid, not only yield more accurate predictions of pupil behavior under classroom conditions, but also assist the teacher in guiding pupil motivation and subsequent behavior along educationally desirable lines. The concepts of such a theory should relate to (1) the situational variables of the educational environment and (2) observable pupil behavior. Experience in psychological theorizing has shown that behavior, particularly human behavior, can not be conceived simply in terms of the particular combinations of situational variables that lead to particular responses, although ultimately, perhaps, such theories should lead to such formulations, however complex they might be.

For practical reasons it is necessary to postulate certain "intervening variables" which may not be directly discerned in the situation under analysis, but which can ultimately be defined in terms of observables. When we say that the reason a pupil misinterprets certain words in a book lies in his limited previous experience, we are using "limited previous experience" as a rough sort of intervening variable, a variable which, in this case, conceivably could be defined by certain definite antecedent occurrences. In the following theoretical statements such terms as *perceptual meanings, expectancies, symbolic meanings, affective states,* and *ego-involvement,* previously referred to will be used frequently as intervening variables which frequently may be difficult to discern in an actual situation. The attempt will be made to suggest the behavioral cues which may indicate the relative significance of such variables. Of course it is desirable to use such terms as sparingly as possible and to maximize the likelihood of understanding behavior in terms of contemporary and observable variables as much as possible.

For purposes of economy in discussion it will be assumed that the general nature of situational variables of the educational environment, as they might be described by their physical and social attributes, are understood to be more or less as described above on pages 12-14. This will make possible a more direct discussion of the particular cues to which pupils may be sensitive in such situations, the ways in which they may organize these perceptions, and the particular ways in which, depending upon their perceptions and states of readiness, they respond. In the sections which follow, motivation will first be described by the principal qualitative dimensions (1) of the pupils' attending and perceiving activities and (2) of the various modes and directions of active responding to particular situations. In other words, a pupil's particular way of seeing a

situation and his particular way of responding to it will be described by indicating certain qualities which may exist to greater or lesser extent, depending upon the situation and the individual. From these dimensions certain principles will be stated and illustrated in terms of representative school situations.

In other words, it is assumed that "motivation" is not a single aspect of a situation, but, rather, consists of several qualities of perception and behavior. Each quality is assumed to vary quantitatively from the virtual absence to the existence to a high degree of that quality. These qualities are referred to as dimensions, since it is assumed that they are relatively independent of each other.[26]

Motivation as Organization of Attention and Perception

Dimension 1—Cognitive clarity. Every person experiences a particular situation selectively. Certain stimuli have special meanings for him which cause them to be prepotent cues and to stand for familiar entities. The meanings which particular cues have are a function of both prior experiences and the setting in which they occur. Therefore, one of the dimensions of perception that is important in accounting for the organizing and directing aspects of motivation is the extent to which cues have a high degree of meaning to the individual. We can describe particular situations as varying from those in which there is a plentiful supply of meaningful cues, organized in such a way as to reduce confusion and the need to search for meaning to a minimum, to those situations that are exceedingly vague, ambiguous, unstructured, and confusing. In the classroom situation the cues may be predominately physical, symbolic, or social in nature, or the prepotent cues may come from several sources in such a way that the pupil is attending to objects, words, and people at the same time.

Dimension 2—Affective quality. A second dimension which may be used to describe perception of a situation is the affective quality of the cues attended to. It is assumed that substantial numbers of cues or combinations of cues are discerned by the individual as pleasant or unpleasant in varying degrees. Of course, with experience, the shades of affective meanings to the individual become almost infinitely varied. As the individual acquires experience and ability to interpret situations through verbal and other symbolic cues, the affective meanings of particular situations become less

[26] For a discussion of the "dimensional approach" in psychology and education, see Melton, *op. cit.* p. 671.

dependent upon the immediate qualities of the situation and more upon anticipatory interpretations. Thus, for example, the pupil may perceive a particular classroom activity with a pleasing affective coloring because he realizes that the recess period is to follow, and the determination of this affective quality is more dependent upon his ability to look ahead and less dependent upon his immediate sensory perceptions.

Dimension 3—Ego-involvement. A third quality of perception important to educational motivation is the extent to which the cues to which the pupil is attending are ego-involved. It is assumed that certain cues and combinations of cues are discriminated in such a fashion as to have unique self-reference. It has been pointed out previously that certain situations, objects, people, words, etc. are discerned as involving in some way the individual's view of himself.[27] It is further assumed that self-perceptions are of such a nature that the individual tends to protect, maintain, or enhance the integrity, status, and stability of this sense of self.

Particularly significant ego-involved perceptions in the classroom are those related to problem-solving situations. In some cases the problem focally involves the social situation, and the persons in the situation are relevant to the individual's self-concept either by virtue of their perceived power to enhance or detract from the self-concept or by virtue of the sense of identification with others which the individual holds (i.e., the extent to which others are co-extensive with or a part of the individual's self-concept). The experience of being praised by his teacher is an ego-involved experience when it enhances a pupil's sense of self-hood. A pupil's experience of seeing his best friend enjoy success may likewise be an ego-involved experience, provided that the pupil regards his friend as a significant part of his sense of self or as strongly identified with him.

When problem situations involve the pupil's attention to tasks or the manipulation of materials, symbols, or ideas, then such tasks become ego-involved as long as performance of the tasks is perceived as potentially altering the status of the pupil's self-concept in any way. A pupil's success or failure at any task or problem is directly dependent upon the ego-involvement of that problem or the extent to which it affects the pupil's sense of self. It is probably safe to say that no situation can be psychologically succeeded in or failed unless it has some significance to the individual's sense of self.

[27] Pages 24-25.

Similarly the extent to which an individual conceives of himself as striving or trying, or the extent to which he sees a given situation as worthy of effort, is a function of its relevance to his sense of self. It should be added, of course, that increased symbolic control of perception may cause the immediate perception of the situation to be less important in determining ego-involvement.

Other dimensions. The three dimensional qualities of perception of cognitive clarity, affective quality, and ego-involvement are the principal organizing aspects of motivation in education. There are other qualities which may be mentioned. One of these is "size of cognitive field," that is, the extensiveness of attention to cues in terms of time, space, generality, or specificity. Another quality is that of fantasy or imaginative content versus content determined primarily by external cues. Some perceptions are so minimally a function of sensory or symbolic cues as to be called hallucinatory. Another quality is the extent of symbolic control. However, all of these appear to be either derivatives of the first three dimensions or aspects of perception that seem of marginal importance to the educational situation.

In summarizing the various dimensions of the perceptual-organizational aspects of motivation, it should be pointed out that the three basic dimensions appear to be relatively independent of each other. Thus, it is possible to describe situations as varying in all three dimensions. For example, a pupil working at a series of arithmetic examples may perceive the situation with high cognitive clarity as affectively pleasant and highly ego-involved. Another pupil working at the same example may perceive the situation as being extremely confusing and ambiguous, but affectively pleasant and also involving his own concept of self. (The affective tone might, in this instance, be due to the support of a sympathetic teacher.) Other pupils may show other variations in these three dimensions. Some situations may be almost completely lacking in ego-involvement. An example of this, where affective tone is unpleasant and cognitive clarity low, might be that of a pupil suffering from a physical ailment whose symptoms are vague and diffuse. Routine activities of the school may be very little ego-involved and yet vary considerably along the other two dimensions.

Motivation as the Energizing and Directing of Responses

Some theorists prefer to proceed directly from the person's perception or subjective experience to the prediction of his responses by assuming that responses will automatically be determined by

what the individual is experiencing. Thus, some would claim that the relationship is so direct that one can infer the perceptual field directly from behavior.[28] Educators who hold to this point of view state that pupils are continually responding strictly as a result of their unique interpretations of the situation. To this writer, this point of view seems to be oversimplifying matters. In cases of habitual or irrational behavior the control of action by the perceptual field may be slight. A pupil may engage in a habit-bound sequence of activity while attending to other cues. Sometimes a pupil's behavior may appear to be more appropriate to a situation than it actually is when we have some basis for knowing the way in which he is perceiving it. Therefore, this discussion will first consider the principal dimensions of pupil responses as they are directly observed before considering the relationships between the perceptual and energized aspects of motivation.

Dimension 1—Energy level. Probably the most apparent quality of behavior that implies motivation is its level of energy. The highly motivated individual is thought of as responding more frequently, more persistently, and/or more vigorously. In fact, the concept of motivation has sometimes been limited to this quality of behavior. Viewed from an educational point of view, the amount of energy expressed in behavior is but one of its significant aspects. The fact that this quality is easy to observe directly, as well as the fact that educational situations require various appropriate degrees of this quality, makes it an important one. This dimension is conceived simply as ranging from low to high energy level, although, for particular analyses, frequency, intensity, or persistence of a response may be the particular aspect that is significant.

Dimension 2—Organization and direction of response sequences. A second quality of overt behavior is defined by the extent to which it is clearly organized and directed. At the high end of a postulated continuum may be considered sequences of responses which directly and smoothly lead from one action to another, without hesitation or competition between various response tendencies. At the low end of the continuum lie responses which are abortive, hesitant, contradictory, and imperfectly coordinated. In general, those responses at the high end of the continuum are well learned and involve effective "feedback" functions between responses and perception of the results of such responses. These may sometimes be thought of as goal-directed activities because of their directional quality and because

[28] Snygg, and Combs, *op. cit.*, p. 30.

they usually terminate in some well-defined condition with which the person is satisfied or will do nothing further to alter. However, they may not necessarily be goal-directed if, by that term, is meant cognitive or symbolic anticipation of an end point.

Dimension 3—Approach-avoidance. A third dimension of responding activity is a postulated continuum defined at one end by strong, definite approach activity and, at the opposite end, by clear-cut avoidance behavior. This quality of behavior is probably more difficult to observe. In general, it may be discerned by determining the extent to which a person's behavior appears to be characterized by progressive movement (spatially, temporally, psychologically) away from or toward certain stimuli. The distinction may be thought of as the extent to which the individual is striving either to perpetuate or to discontinue a state of affairs that is clearly part of his perceptual field. Thus, the pupil who tries to choose a seat as far as possible from another pupil whom he dislikes may be said to be engaging in avoidance behavior. At first glance this concept may seem to be an unnecessary complication of simple purposive or goal-directed behavior. In our example, the pupil may be said to have the goal of keeping away from the disliked pupil when he chooses a more distant seat. However, experimental studies and clinical data strongly suggest that involved in avoidance behavior there are qualities other than the removal of certain stimuli, which clearly distinguish it from approach behavior.[29] One of the chief distinguishing characteristics is the fact that in avoidance behavior, activity when the situation to be avoided is nearby is relatively more energetic and when the goal state is farther away, activity is relatively less energetic. In approach behavior the gradient is not as steep. Another characteristic is the greater adaptability of approach behavior as contrasted with inefficiency or rigidity in avoidance behavior. Experimental studies of the effects of reward and punishment on learning generally support the thesis that the effects of punished response (leading to avoidance behavior) are more variable and undependable, while rewarded responses (leading to approach behavior) are more predictable and adaptive.[30]

Other dimensions. It would be almost impossible to describe in detail the almost infinite variety of qualities to be found in human

[29] McClelland, David C., *Personality*, pp. 458-466.

[30] Deese, James, *The Psychology of Learning*, pp. 110-125.

TABLE 1. SAMPLE BEHAVIORAL CHARACTERISTICS ASSOCIATED WITH SIX "DIMENSIONS" OF MOTIVATION

Dimension	Behavioral characteristics
Cognitive clarity	Attention span Ability to verbalize about a situation Appropriateness of response to situation Trial and error; hesitance-confidence Behavior which appears to "test" authority relationships, roles, etc. Drawings, expository writing, and other products which show pupil's interpretation of experience
Affective quality	Expressive behavior—facial expression, vocal tone, nervous habits, etc. Escape and withdrawing tendencies—day-dreaming, excuse-making, etc. Tendencies to perpetuate the conditions of a situation that appear to be enjoyed
Ego-involvement	Seeking approval, affection, etc. Concern for success, failure Emotional behavior when thwarting occurs Setting of goals, levels of aspiration, etc. Escape and withdrawal behavior Expressions of guilt Expressions of pride Friendships, group membership sought, adult figures eliciting distinctive reactions
Energy level	Vigor, persistence, repeated trials
Organization and direction	Amount of prompting and guidance needed Adaptability of response; amount of rigidity, stereotypy Ability to anticipate verbally the outcomes of a sequence of behavior Trial and error behavior
Approach-avoidance	Difference in effort exerted at different stages of an activity (steep "gradients" may suggest avoidance) Expressive behavior Types of reward or reinforcement which appear to satisfy Types of choices which pupils make

behavior. It is believed that the three above-described dimensions are useful and basic to an adequate description of most behavior in the classroom. One inadequacy of the three dimensions suggested is their extreme generality. This may be partially corrected if it is added that the placement of a given bit of behavior on these dimensions should be supplemented by a clear indication of the particular mode or modes of response that are involved. Some of the more important modes are: motor (manipulatory, locomotive, perceptual-motor, etc.), symbolic (speaking, listening, reading, writing, etc.), emotional, attentive (passive observation, searching, exploring, etc.), and reflective (thinking, imagining, fantasy production, etc.).

To illustrate the use of these dimensions and modes in the analysis of behavior, a simple example will be given:

Consider two pupils, both engaged in committing a poem to memory. Let us suppose that Pupil A has been assigned this task by his teacher and the time is rapidly approaching when he must recite in class. Careful observation of the way he goes about this task shows that he is doggedly putting forth every effort to master this task, so that on Dimension 1 (energy level) he is operating at a fairly high level. Let us suppose that his efficiency at the task is such that a great deal of trial and error and short bursts of rather rigidly repetitive activity are typical, so that on Dimension 2 (organization and direction) his behavior tends toward the low end (although not extremely so, since we will assume that he is making some progress). To determine the quality of his behavior on Dimension 3 (approach-avoidance) is a more difficult matter unless we observe his activity through the actual performance in class. If we note that the energy level increases markedly as the assignment date approaches and that his efficiency is at a lower level than is characteristic of him, and if we note expressions of relief or escape when the task is completed, we may infer that his sequence of behavior in learning the poem was fairly high on the avoidance end of the scale. Psychologically, what is being avoided, of course, is the unpleasant consequences of failing to learn the poem.

Now let us suppose that Pupil B has chosen to learn the same poem, but has done so because it is one which he wishes to recite with some friends in a choral reading group that has decided to put on its own program as a part of a club's activities. While the energy level and degree of organization of behavior (Dimensions 1 and 2) may not differ significantly from that of Pupil A, the quality may be such that it is clearly approach behavior, in this case

oriented toward a desired goal rather than a situation which would be avoided if possible.

From the above example it may be seen that similar situations, in which overt behavior, when casually observed, may suggest identical motivation, on closer analysis may be found to differ significantly in at least one basic dimension. The example could be greatly refined by describing in greater detail the particular modes of behavior shown in each case. If we added to these cases a thorough description of the principal perceptual dimensions of motivation, the picture would be even clearer.

In order to summarize the approach to motivation suggested above, three tables are presented. In Table 1 some sample behavioral characteristics are presented which commonly may serve as indicators of the placement of a bit of behavior on each of the dimensions of both the perceptual and response aspects of motivation. The behaviors listed are intended to be suggestive only; it should be realized that further research is needed to establish the relative value of these characteristics. Table 2 presents a suggestive list of factors which are probably primary in determining the particular qualities of perception to be found. Table 3 presents similar information with reference to the response dimensions.

TABLE 2. SOME SAMPLE VARIABLES RELATED TO PRIMARY QUALITIES OF PERCEPTION

Quality of perception	Sample variables
Cognitive clarity	Pupil's prior experience
	Stability of cognitive field
	Pupil's ability to symbolize
	Pupil's ability and freedom to explore and search for meaning
	Pupil's level of maturation
Affective quality	Pupil's prior experience
	Intensity of stimulation
	Pupil's physical and physiological state
	Pupil's ability to symbolize
Ego-involvement	Pupil's prior experience (particularly *social* experience)
	Roles and status positions of other persons in the situation
	Emphasis placed on success and failure by teacher
	Amount of praise and/or blame
	Anticipation of signs of affection, hostility, disappointment, etc., from others
	Pupil's symbolic representation of pertinent situations and people

TABLE 3. SOME SAMPLE VARIABLES RELATED TO PRIMARY QUALITIES OF PUPIL RESPONSES

Quality of response	Sample variables
Energy level	Physical resources and physiological state of pupil Ego-involvement of pupil's perceptions Affective tone of pupil's perceptions Extent of emotional involvement Proximity to goal Proximity to threat Clarity of cognitive field
Organization and direction	Pupil's prior experience; fund of habits Clarity of cognitive field Freedom from emotional involvement Amount of symbolic control (anticipation of consequences) Amount of "feedback" (perception of results)
Approach-avoidance	Anticipation of pleasurable or unpleasant affect Anticipation of ego-enhancement or ego-threat Amount of symbolic control (anticipation of consequences) Clarity of cognitive field Intensity of stimulation

Interrelationships among motivational variables. The concepts of motivation developed in the preceding paragraphs can lead to understanding of pupil behavior only if they can be related to each other and to other psychological variables. The preceding tables have suggested some of the independent variables that are related to the primary dimensions of motivation. It remains to suggest some tentative principles governing the relationships of types of behavioral activity to the perceptual dimensions of motivation. The statements which follow are brief representative postulates or statements of underlying hypotheses that seem to be implied by or follow from, the view taken here. These statements are purposefully brief and couched in general terms. Most of these have some basis in experimental findings. They are presented to suggest the directions which such a theoretical approach should take and the types of hypotheses that need testing in educational practice, as well as to depict what seem to be, at this point, the main principles of such a theory.

1. The more meaningful the situation the greater is the probability that pupil activity will be well organized and show

smooth flow of response sequences with a minimum of prompting and guiding.

2. When many cues are available, the pupil will tend to attend more focally to those stimuli that are most meaningful, while cues with lesser cognitive clarity will tend to be ignored.

3. Cues with partial or semi-ambiguous meanings will tend to evoke exploratory behavior that is aimed at clearer meanings. In other words, as long as a situation is neither totally confusing nor extremely meaningful, pupils will try to ascertain the meaning of unclear cues. This is tantamount to postulating that there is a "natural" drive to explore and clarify meanings which has no goal other than enhanced meaning.

4. Pupils will tend to avoid or eliminate situations that have predominantly unpleasant affective tone.

5. Pupils will tend to maintain and preserve situations perceived as affectively pleasing. (It should be added here that certain types of stimulation are affectively pleasant at certain intensities, but when increased to higher intensity they may become extremely unpleasant.)

6. The affective equality of a situation will determine, in large part, the extent to which behavior shows an avoidance or approach quality.

7. The affective quality of future events anticipated by symbolizing activity (reflective thinking, imagination) may supersede the immediate qualities of a situation, provided that symbolic control is adequate to compete with immediate qualities. Thus, as pupils gain in their ability to think and anticipate future events through symbolization, they achieve ability to overlook or withstand present discomforts, since the effective cues are self-produced representations of future goals.

8. Cues which are ego-related tend to supersede other cues in competing for the pupil's attention.

9. Pupils will tend to respond with greater vigor and zest to those situations that are ego-involved.

10. Exploratory activity, constructive problem-solving activity, and creative endeavor will be heightened when the situation is perceived as one that is conducive to self-enhancement.

11. Protective, defensive, withdrawing behavior, as well as perfunctory performance in problem-solving and task situations, will tend to occur when the situation is perceived by the pupil as threatening or potentially threatening to his self concept.

Application of theory to teaching situations. The concepts and principles that have been described in the proposed theoretical approach to motivation need to be tested in carefully conducted research. Nevertheless, attempts to look at everyday teaching situations in the light of these concepts should offer useful tests of their applicability. One approach to such empirical testing is to suggest that teachers rephrase the commonly asked questions about motivational problems in terms of the proposed concepts or dimensions that appear to offer a more valid way of looking at motivation. It is suggested here that the questions "How can I motivate students?" "How can I tap the interests and concerns of pupils?" "How do I curb undesirable motives?" and the like, are not conducive to a diagnostic understanding of the motivational dynamics of the classroom situation. Instead, the teacher (or other observer of a classroom situation) could profitably ask the following types of questions which are designed to determine just what the current status of motivation may be:

1. How meaningful is this situation to the pupils? What are the cues to which they are responding and to what extent are they unambiguous and non-conflicting? Are they cues that are appropriate to the situation (as the teacher interprets it)? How may the teacher clarify the situation so that more appropriate meanings are seen by pupils?

2. In what ways is this situation pleasant or unpleasant for pupils? Do they anticipate outcomes which are predominantly pleasant or unpleasant? Can they interpret the situation in such a way as to overlook currently unpleasant aspects?

3. In what way is the pupil's sense of self affected by this situation? Does he see this situation as one which offers him the opportunity to enhance his self-concept by making his behavior appear *to him* wiser, more competent, better approved, more like others whom he admires, etc. Does he see this situation as one in which the possibilities of failure, loss of esteem, loss of status, loss of affection, etc., loom large so that he needs to be on guard?

4. Is the pupil's energy level appropriate to the demands of the situation and the desired outcomes? Is he sufficiently active or persistent to benefit maximally from the situation?

5. Is the pupil responding in a sufficiently well-organized, directed, and efficient fashion to suit the purposes of the situation? Is there a need to alter the situation in such a way as to cause his reaction to be better directed? Does the organization of his

behavior reflect emotional security, clarity of perception, and adequate comprehension on his part?

6. Does the pupil show that he is primarily concerned with achieving a state of affairs that is clearly desired and sought after, or is he primarily trying to avoid an unpleasant state of affairs? What seem to be the goals or threats which are focal in the pupil's way of looking at things?

In the case of each type of question the teacher may also think of procedures which will modify the situation in such a way as to evoke more desirable responses and attitudes. This approach takes the teacher's attention away from concern with mysterious needs and interests, and focuses attention on the immediate situational problems of clarifying meanings; evoking anticipations of satisfaction (or dissatisfaction); offering pupils opportunities for self-enhancement; encouraging appropriate expenditure of energy; organizing and directing action; and approaching goals or avoiding threats.

It is important, of course, to temper these concepts with appropriate understanding of the developmental level of particular pupils. The importance of particular dimensions of motivation probably varies according to developmental level. Thus, for example, children of kindergarten age, because of limited maturation and experience, are much less able to be persistent and self-directing than older children. Their ability to symbolize limits the cues to which they respond. Their self-concepts have certain characteristic ways of defining success and failure, desirable roles to play, and persons with whom to identify.

It would be impossible in the present discussion to describe the relationship of this approach to motivation to the whole problem of learning. Suffice it to say that this theory should be applicable to many different types of learning activities and should be conducive to a diagnostic approach to particular learning problems. Because it focuses attention on the learner's total perception and total activity in the learning situation, this approach to motivation would seem to fit well an educational view of learning that sees the pupil's classroom activity coextensive with his total realm of experience. Thus we could say that it would fit a "reality-centered" view of curriculum and method as opposed to a "child-centered" or "subject-centered" view.[31]

Application of theory to educational research. Throughout the preceding discussion it has been pointed out that the concepts and

---

[31] Cantor, Nathaniel, *The Teaching-Learning Process,* pp. 100-120.

principles developed need to be tested through research. While many have received attention by experimental and clinical psychologists, there is a need to test them in educational settings. Probably the first step toward such research is the development of techniques of measurement designed to assess the various qualities of motivation present in given situations. In part this could be achieved by devising tools and guides for the observation of natural pupil behavior in the classroom. Thus, if we could reliably discern the extent to which pupils perceive and act according to the six dimensions described (and possibly other dimensions that might need to be developed), systematic experimentation could be carried out to test the effects that different kinds of guidance, group activity, materials, etc. have upon the motivation of pupils.

Since observational techniques may not be feasible for many kinds of research, other instruments and techniques may need to be developed. One type of instrument that appears promising is the projective technique. While most research in this field has been done from a strictly clinical or purely experimental point of view, pictures and other stimuli designed to elicit projective and other perceptual interpretations by children could be adapted to pertain to uniquely educational situations.

Verbal reactions to such pictures may yield new insights into the ways in which children perceive school situations. The use of psychodrama and role-playing may be of value.[32] Another approach that may yield useful results is that of stimulated recall,[33] in which classroom situations are sound recorded and students listen to sections of recording and describe how they felt at particular moments.

Various techniques of estimating pupil goals have been used in research.[34] The most widely used technique is that involving measures of pupils' level of aspiration in task situations.[35] Studies

---

[32] Haas, R. B., and Moreno, J. L., "Psychodrama as a Projective Technique," in *An Introduction to Projective Techniques,* pp. 662-675.

[33] Bloom, Benjamin S., "Thought Processes in Lectures and Discussions," *Journal of General Education* 7:160-169, April, 1953; Bloom, Benjamin S., "Personality Variables and Classroom Performance," *Journal of the National Association of Deans of Women* 16:159-164, June, 1953.

[34] Anderson, H. H., and Brandt, H. F., "Study of Motivation Involving Self-Announced Goals of Fifth-Grade Children and the Concept of Aspiration," *Journal of Social Psychology* 10:209-232, May, 1939.

[35] Lewin, and others, *op. cit.*

of level of aspiration, particularly those conducted by Sears,[36] have done much to show the effect of ego-involvement upon goal setting.

Sample data from a recent unpublished study by Lynch and DeVault,[37] concerning levels of aspiration of fifth-grade children on different tasks performed in typical classroom situations, may be used to show how differences among pupils in the particular dimensions of motivation proposed in the present theory may account for the typical variation in the ways that pupils appear to set their goals or levels of aspiration. In this particular study pupils worked at simple tasks such as working arithmetic problems, finding which of two words is represented by a group of scrambled letters, tracing mazes, and placing pegs in a peg-board. In the case of each task the pupils tried to accomplish as much as they could in a brief period of time (two minutes). At the end of the time they were able to find out quickly the score that they made. Then the score of each pupil was placed on the blackboard. Before proceeding to the next task of similar nature, pupils were asked to write down on a card the score that they were going to try to make on the next trial. The difference between the score they had achieved and the "try" score was taken as the discrepency score or measure of their level of aspiration. Tasks were administered in groups of five.

Figures 1, 2, and 3 show some typical performances and "goal-setting" of pupils in one of the groups tested. As will be noted, in Figure 1 the discrepencies are all positive and small, while in Figure 2 they tend to be either large and inflexible or negative, and the levels of aspiration tend to be rather unresponsive to the variations in actual score achieved. The pupils illustrated in Figure 3 show similar lack of responsiveness to variations in score, with some lowering their level when their scores go up, others raising their level when the scores go down.

---

[36] Sears, P. S., "Levels of Aspiration in Academically Successful and Unsuccessful Children," *Journal of Abnormal and Social Psychology* 35:498-536, October, 1940; Sears, P. S., "Level of Aspiration in Relation to Some Variables of Personality Clinical Studies," *Journal of Social Psychology* 14:311-336, November, 1941.

[37] Lynch, W. W., and DeVault, M. V., *A Study of Level of Aspiration and Sociometric Status Among Fifth-Grade Children*, unpublished study.

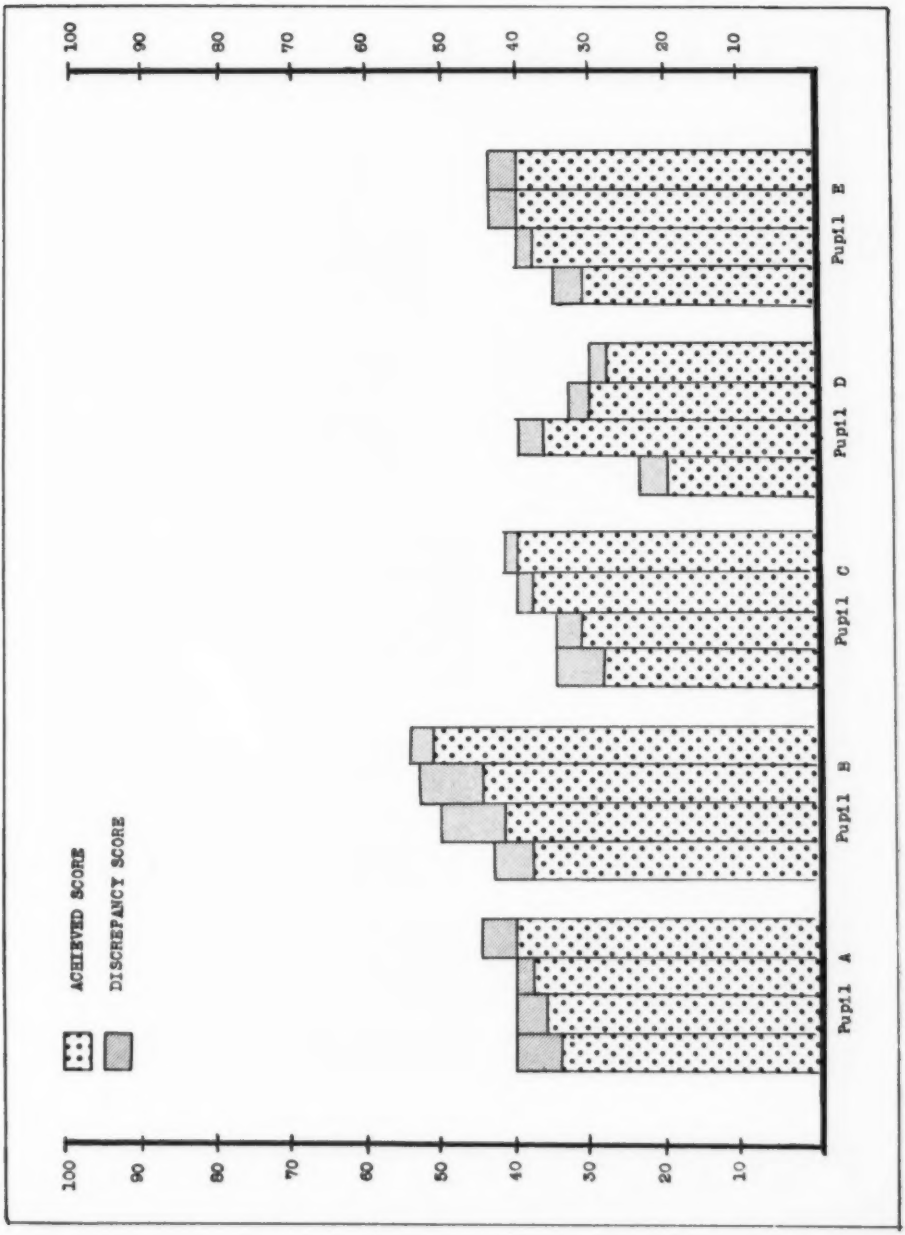
100
90
80
70
60
50
40
30
20
10
ACHIEVED SCORE
DISCREPANCY SCORE
Pupil A
Pupil B
Pupil C
Pupil D
Pupil E

Figure 1.

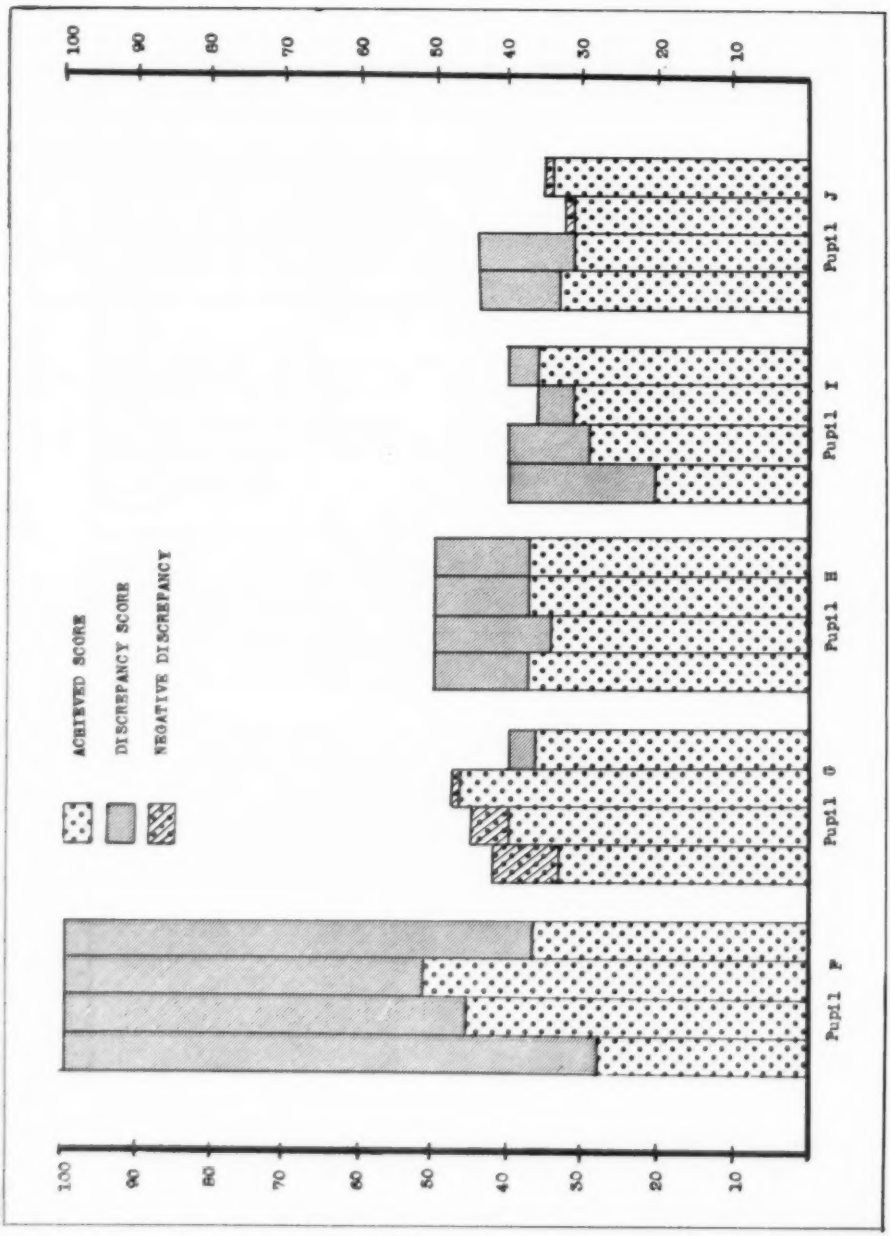
100
90
80
70
60
50
40
30
20
10
ACHIEVED SCORE
DISCREPANCY SCORE
NEGATIVE DISCREPANCY
Pupil F
Pupil G
Pupil H
Pupil I
Pupil J

Figure 2.

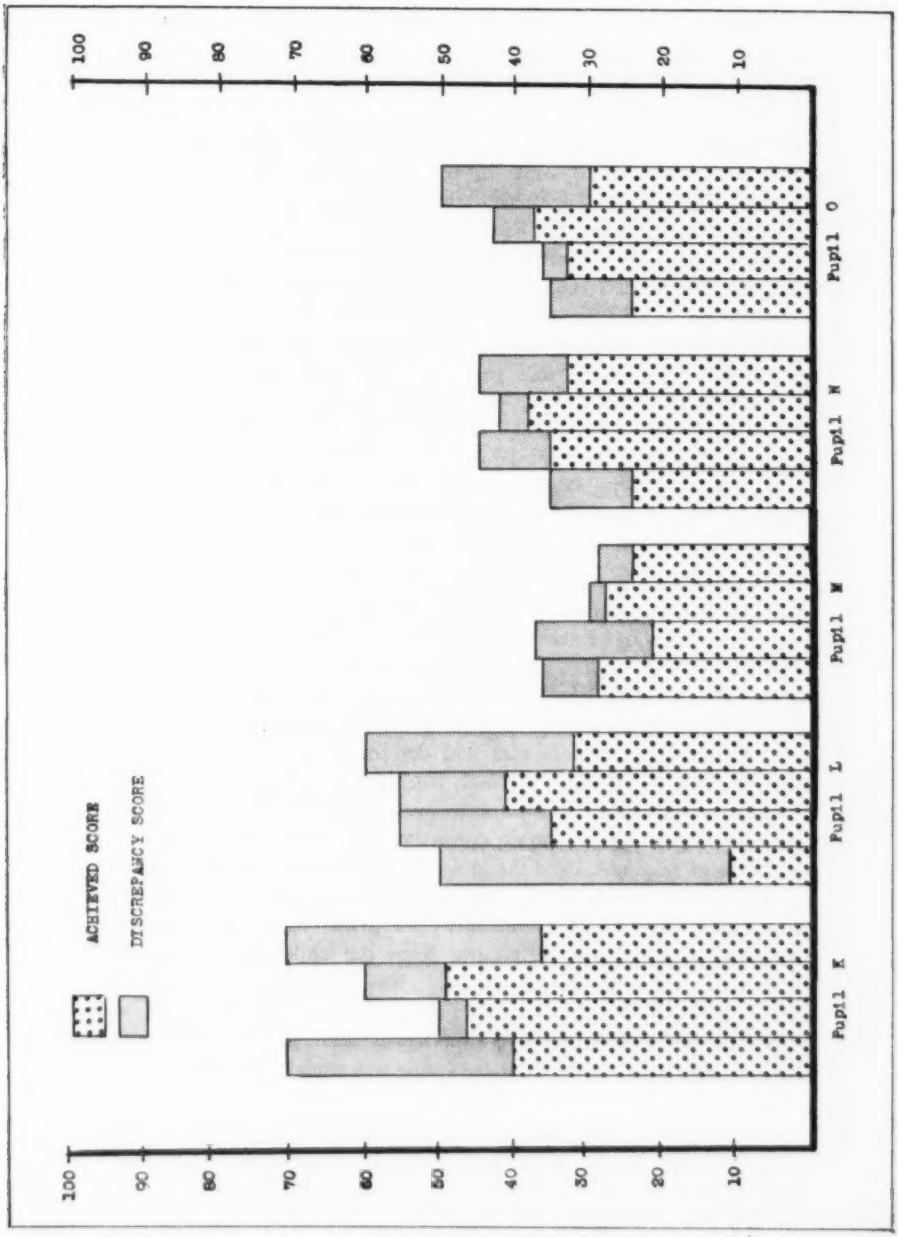

Figure 3.

Figure 2.

What clues do these data give us concerning the motivation of the pupils involved? Certainly it would be unwise to say that those with the highest levels of aspiration (Pupil F for example) are the most strongly or appropriately motivated pupils. To understand these variations we need to know more about the pupils involved. We need to know the extent to which they understand the situation at hand, including the directions, the task itself, and the attitudes of other pupils and the teacher. Are the pupils in Figure 3 reacting to conflicting cues so that achievement and "try" meanings are perceived as involving different factors? Is it possible that the particular meanings of the situation to Pupil F are such that to him the word try means aiming at the top, while the pupils in Figure 1 are more "task oriented" and more clearly attending to their own achievement? Is it possible that variations exist in the type of ego-involvement, so that Pupils G and J set negative levels so that they will be assured of success as they define it? Is it possible that Pupils F and H are so concerned with possible failure that they derive at least temporary pleasant effect or feelings from setting idealistically high levels?[38]

Without going into the application of other motivational dimensions to the research described, it can be pointed out that such questions as are asked above are of very real educational significance. If educators believe that learning occurs in an optimum fashion when success is experienced in learning activities, and if they believe that pupils should learn to set realistic goals for themselves, then they need to understand the factors that determine the individual's goal-setting. The child who, although ostensibly working toward a desired goal, is actually attempting to avoid or escape from unpleasant consequences or ego-damaging consequences, will be learning different kinds of responses than the child who is working toward a clearly identified goal which is ego-enhancing and/or affectively pleasing. The child who works vigorously but with poor direction and organization will learn differently from the child who works less vigorously and with better control. The child who has superior ability to symbolize his experiences and hence potentially better ability to perceive his school experiences with greater clarity but whose perception is distorted by strong emotional cues which com-

---

[38] Discussion of these questions may be found in: Festinger, L., "Wish, Expectation, and Group Performance as Factors Influencing Level of Aspiration," *Journal of Abnormal and Social Psychology* 37:184-200, April, 1942; Gardner, John W., "The Relation of Certain Personality Variables to Level of Aspiration," *Journal of Psychology* 1:191-206, January, 1940; Lewin, *op. cit.;* and Sears, *op. cit.*

pete for his attention will learn differently from the child of equal intelligence or symbolizing ability whose school experience is such as to enable him to use his ability in a functional and creative fashion.

It is believed that, if educators can pay greater attention to these immediate qualities of motivation as they occur in the classroom, they will be better able to guide the experiences of those they teach. This does not gainsay the importance of other ways of thinking about motives. For many purposes it is useful to use the terminology of basic needs, interests, drives, and the like. The distinction between *intrinsic* and *extrinsic* motivation is useful for certain purposes. While the aproach to motivation proposed in this bulletin may seem to make more complicated the entire question of motivation, recent psychological research amply demonstrates that human motivation is tremendously complicated. It is believed that, if those whose work constantly brings them in touch with the many problems of motivation in the school and the classroom can be encouraged to substitute closer attention to the qualities of pupil behavior for verbal assumptions about inner motives and other forces, the problems of "how to motivate" will be easier to solve.

BIBLIOGRAPHY

Anderson, G. L., and Gates, A. I., "The General Nature of Learning," in *Learning and Instruction,* the Forty-ninth Yearbook, pt. 1, pp. 12-35, National Society for the Study of Education, University of Chicago Press, Chicago, 1950.

Anderson, H. H., and Brandt, H. F., "Study of Motivation Involving Self-Announced Goals of Fifth-Grade Children and the Concept of Aspiration," *Journal of Social Psychology* 10:209-232, May, 1939.

Berrien, F. K., *Comments and Cases on Human Relations,* Harper and Brothers, New York, 1951, 500 pp.

Bloom, Benjamin S., "Personality Variables and Classroom Performance," *Journal of the National Association of Deans of Women* 16:159-164, June, 1953.

"Thought Processes in Lectures and Discussions," *Journal of General Education* 7:160-169, April, 1953.

Buhler, Charlotte, and others, *Childhood Problems and the Teacher,* Henry Holt and Co., New York, 1952, 372 pp.

Cantor, Nathaniel, *The Teaching-Learning Process,* The Dryden Press, New York, 1953, 350 pp.

Cantril, Hadley, *The "Why" of Man's Experience,* The Macmillan Co., New York, 1950, 198 pp.

Cronbach, Lee J., *Educational Psychology,* Harcourt, Brace and Co., New York, 1954, 628 pp.

Davis, Robert A., "The Teaching Problems of 1,075 Public School Teachers," *Journal of Experimental Education* 9:41-60, September, 1940.

Deese, James, *The Psychology of Learning,* McGraw-Hill Book Co., New York, 1952, 398 pp.

Festinger, L., "Wish, Expectation and Group Performance and Factors Influencing Level of Aspiration," *Journal of Abnormal and Social Psychology* 37:184-200, April, 1942.

Gardner, John W., "The Relation of Certain Personality Variables to Level of Aspiration," *Journal of Psychology* 9:191-206, January, 1940.

Haas, R. B., and Moreno, J. L., "Psychodrama as a Projective Technique," in *An Introduction to Projective Techniques,* pp. 662-675, edited by H. H. Anderson, and G. L. Anderson, Prentice-Hall, Inc., New York, 1951, 722 pp.

Havighurst, Robert J., *Developmental Tasks and Education,* Longmans, Green and Co., New York, 1952, 2nd ed., 100 pp.

Hilgard, E. R., *Introduction to Psychology,* Harcourt, Brace and Co., New York, 1953, 659 pp.

"The Role of Learning in Perception," in *Perception—An Approach to Personality,* pp. 95-119, edited by Robert R. Blake and Glenn V. Ramsey, The Ronald Press Co., New York, 1953.

Hurlock, Elizabeth B., "An Evaluation of Certain Incentives Used in School Work," *Journal of Educational Psychology* 16:145-159, March, 1925.

Korzybski, Alfred, "The Role of Language in the Perceptual Process," in *Perception—An Approach to Personality,* pp. 170-205, edited by Robert R. Blake and Glenn V. Ramsey, The Ronald Press Co., New York, 1953, 442 pp.

Lewin, Kurt, and others, "Level of Aspiration," in *Personality and the Behavior Disorders,* pp. 333-378, edited by McV. J. Hunt, Ronald Press Co., New York, 1944.

McCandless, Boyd, and Rosenblum, Sidney, "Psychological Theory as a Determiner of Experimental Pattern in Child Study," *Review of Educational Research* 22:496, December, 1952.

McClelland, David C., *The Achievement Motive,* Appleton-Century Crofts, Inc., New York, 1953, 384 pp.

Personality, William Sloane Associates, New York, 1951, 654 pp.

Mech, Edmund V., and others, *An Experimental Analysis of Patterns of Differential Verbal Reinforcements in Classroom Situations,* Bulletin of the School of Education, vol. 29, no. 5, Indiana University, Bloomington, September, 1953, 26 pp.

Melton, Arthur W., "Learning," in *Encyclopedia of Educational Research,* p. 671, edited by W. S. Monroe, The Macmillan Co., New York, 1950.

Mowrer, O. H., *Learning Theory and Personality Dynamics,* pp. 25-64, The Ronald Press Co., New York, 1950, 776 pp.

Murphy, Gardner, *Personality—A Biosocial Approach to Origins and Structure,* Harper and Brothers, New York, 1947, 999 pp.

Olson, Willard C., *Child Development,* D. C. Heath and Co., Boston, 1949, 417 pp.

Prescott, Daniel A., *Emotion and the Educative Process,* American Council on Education, Washington, D.C., 1935, 323 pp.

Redl, Fritz, and Wattenberg, William W., *Mental Hygiene in Teaching,* Harcourt, Brace and Co., New York, 1951, 454 pp.

Sears, P. S., "Levels of Aspiration in Academically Successful and Unsuccessful Children," *Journal of Abnormal and Social Psychology* 35:498-536, October, 1940.

"Level of Aspiration in Relation to Some Variables of Personality Clinical Studies," *Journal of Social Psychology* 14:311-336, November, 1941.

Sherrif, M. and Cantril, H., *The Psychology of Ego-Involvements*. John Wiley and Sons, New York, 1947, 525 pp.

Snygg, Donald, and Combs, Arthur W., *Individual Behavior: A New Form of Reference for Psychology*, Harper and Brothers, New York, 1949, 386 pp.

Witty, P. A., and Coomer, A., "Activities and Preferences of a Secondary School Group," *Journal of Educational Psychology* 34:65-76, February, 1943.

Wright, Herbert F., and others, "Toward a Psychological Ecology of the Classroom," *Journal of Educational Research* 45:187-200, November, 1951.

Young, P. T., "Motivation," in *Encyclopedia of Educational Research*, pp. 755-761, edited by W. S .Monroe, The Macmillan Co., New York, 1950.

Bulletins in the Field of Education

Indiana University

The *Bulletin of the School of Education,* Indiana University, was first published in 1924 and has appeared regularly since that time. A complete list of the bulletins may be obtained from the School of Education upon request. The studies included in the present and in the two volumes immediately preceding it in date are listed below. Unless otherwise indicated, these may be obtained for $1 each from the Indiana University Bookstore, Bloomington, Indiana.

The Local School Facilities Survey, by Harold H. Church, Paul W. Seagers, W. Monfort Barr, William H. Fox, and Maurice E. Stapley, Vol. XXIX, Nos. 1 and 2, 1953, 96 p.

The Tenure of Indiana School Administrators, by Raleigh W. Holmstedt, Vol. XXIX, No. 3, 1953, 36 p.

A Guide to the Source Materials Relating to Education in the Laws of the State of Indiana 1816-1851. Part One: 1816-1838, by Velorus Martz and Stanley E. Ballinger, Vol. XXIX, No. 4, 1953, 96 p.

An Experimental Analysis of Patterns of Differential Verbal Reinforcements in Classroom Situations, by Edmund V. Mech, Francis M. Hurst, J. Donavon Auble, and Nicholas A. Fattu, Vol. XXIX, No. 5, 1953, 25 p.

Indiana and Midwest School Building Planning Conference: Proceedings, Vol. XXIX, No. 6, 1953, 104 p.

Use of Evaluative Criteria in the Indiana Secondary Schools, by Carl G. F. Franzén, Christian Jung, and Otto Hughes, Vol. 30, No. 1, 1954, 83 p.

The Organization of the School of Education, Indiana University, for Policy Development, by A. Stafford Clayton, Vol. 30, No. 2, 1954, 43 p.

An Analysis of the Current Expenditures of Selected Indiana High Schools, by W. Monfort Barr, Vol. 30, No. 3, 1954, 30 p.

Promising Curriculum Practices in Secondary Schools in Indiana, by Indiana Association of Secondary School Principals—Editors: Carl G. F. Franzén, Arthur Hoppe, and Donald L. Simon, Vol. 30, No. 4, 1954, 98 p.

Indiana and Midwest School Building Planning Conference: Proceedings, Vol. 30, Nos. 5 and 6, 1954, 123 p. $2.

A Brief History and Analysis of the Operation of the Educational Placement Service at Indiana University, by August William Eberle, Vol. 31, No. 1, 1955, 30 p.

An Approach to the Study of Motivational Problems in Education, by William W. Lynch, Jr., Vol. 31, No. 2, 48 pp.